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10/568,545

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Raimo Sepponen

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EXAMINER

MEHMOOD, JENNIFER

ART UNIT

PAPER NUMBER

2612

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,545	Applicant(s) SEPPONEN, RAIMO	
	Examiner JENNIFER MEHMOOD	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/14/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "**said**," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method and Arrangement for Monitoring an Object via Localization.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application **should include the following sections in order**. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. **If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:**

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.

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(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

3. Claims 1, 8, 10 and 26 are objected to because of the following informalities: For claims 1 and 10: change the spelling of "localisation" to "localization". For claim 8, change the spelling of "behaviour" to "behavior". For claim 26, change "an signal"" to "a signal". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Regarding claims 1, 8 and 14, the phrases "for example" and "i.e." render the claims indefinite because it is unclear whether the limitations following the phrases are part of the claimed invention. See MPEP § 2173.05(d).

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6. Regarding claims 1, 3, 4, 6-13, 15, 17, 19 and 21-26, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
7. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Regarding claims 1, 2, 10, 11, 13, 14, 16, 17 and 22-24, the limitations "transducer (transducer matrix)" are inconsistent with one another and therefore, the Examiner is unsure if the Applicant is claiming a "transducer" or a "transducer matrix" where it is well known that the matrix includes a plurality of transducers.
9. For claim 2, the phrase "other divisions of conductor" is unclear since "other" could be referring to first, second or "n" divisions. Applicant is required to specify exactly what division(s) is being claimed.
10. For claim 4, "that" line 3 is unclear as to what it is referring back to. Is "that" referring to the characteristic of the object, variations, or conductivity.
11. For claim 12, the phrases "it signal processing means" and "the first transmission path such as via" are completely incomprehensible.
12. For claim 16, the phrases "includes or to it there are attached" is completely incomprehensible.
13. For claim 19, the phrase "or to it has been connected is completely incomprehensible.

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14. For claim 8, the phrase "one or several signals" is unclear since "several" signals could be the first, second, both or even more than just the first and second signals.
15. For claims 19 and 21, "it" line 2 is unclear as to what it is referring to.
16. Claim 1 recites the limitations "the first division" in lines 7; and 8 and "the second division" in line 7; "the first signal" in line 9; "said signal" in line 10; "the first and second divisions" in lines 10 and 11.
17. Claim 3 recites the limitation "said first signal" in line 2; "the heart" in line 4.
18. Claim 4 recites the limitation "said first signal" in line 2.
19. Claim 4 recites the limitation "this signal" in line 3. Is this signal referring to the first or second signal.
20. Claim 6 recites the limitation "said second signal" in line 2.
21. Claim 7 recites the limitations "the results of the evaluation" in lines 3 and 4.
22. Claim 10 recites the limitations "the first division" in lines 5, 6 and 8; "the second division" in line 6; and "the first and second divisions" in line 10.
23. Claim 11 recites the limitation "said heart" in line 4.
24. Claim 12 recites the limitation "the first transmission path" in line 4.
25. Claim 16 recites the limitation "the arrangement" in line 4.
26. Claim 18 recites the limitation "the arrangement" in line 4.
27. Claim 20 recites the limitation "the arrangements" in line 3.
28. Claim 20 recites the limitation "the arrangements" in line 3.
29. Claims 22 and 24 recite the limitation "the distributions of conductor" in line 2.
30. Claim 25 recites the limitation "the special means" in lines 2 and 4.

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31. There is insufficient antecedent basis for these limitations in the claims.

32. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1, 3, 4, 6, 15-17, 19, 20, 22-25 recite the broad recitation "some", and the claims also recite specific limitations which may or may not be inclusively claimed which is part of the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

33. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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34. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Wymore (US 6,515,586).

For claim 1, Wymore discloses A method to monitor localisation, posture, movement or properties of one or several objects (O) to be monitored, such as human body, animal or robot in an environment to be monitored, such as in apartment, public space, industrial or office space or in an animal shelter characterized in that in some area of the environment to be monitored, for example in a floor, wall, or ceiling there is a transducer (TRANSDUCER MATRIX) which is composed from a distribution of conductor, such as a matrix of conductors, and said distribution of conductor includes at least the first division of conductor and the second division of conductor and that a scanning cycle is performed when to the first division of conductor is an excitation signal (HS) connected and the first signal (AS) is derived from a coupling of the excitation signal (HS) between the first and the second divisions of conductor and said signal (AS) includes some information about coupling between the first and the second divisions of conductor (col lns 47-67; Fig. 2; col 6, lns 37-65).

For claim 2, Wymore discloses said scanning cycle is repeated in respect of other divisions of conductor of the transducer (TRANSDUCER MATRIX) (col 6, lns 43-61).

For claim 3, Wymore discloses wherein from said first signal (AS) one derives some information about some essentially internal properties of the object (O) such as electric conductivity and its variations, distributions of tissues in the body, distribution of fluids, function of the heart or respiration (col 9, lns 60-65; Fig. 2, item 202).

For claim 4, Wymore discloses wherein said first signal (AS) some information which is characteristic to the object (O) is derived such as information about electrical conductivity and variations in that and said information is used in purposes to recognize the object (O) (col 11, Ins 15-20).

For claim 5, Wymore discloses the excitation signal (HS) evokes the second signal (IS) in special means (EV) and this signal is received by receiving means (V) (Fig. 1, items 111, 112 and 114; col 3, Ins 18-25).

For claim 6, Wymore discloses wherein said second signal (IS) contains some information related to the object (O) such as information related to identification or status (col 4, Ins 42-63).

For claim 7, Wymore discloses wherein information derived from one or both said signals (AS, IS) is evaluated using criteria which are either fixed, preset or adaptable and based on the results of the evaluation one performs known actions, such as control or alarm functions (col 11, Ins 44-67).

For claim 8, Wymore discloses wherein information derived from one or both said signals (AS, IS) is stored in memory means in order to observe temporal dependence of behaviour of environments to be monitored and of objects (O) for example in such a way that at certain moment registered information which are derived from one or several signals (AS, IS) is stored and this information is used as reference information at later moments derived information (col 4, Ins 7-25 and col 11, Ins 30-36).

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For claim 9, Wymore discloses information derived from one or both said signals (AS, IS) is used to adapt a status of artificial intelligence such as an adaptive or self organizing net (col 5, lns 46-59).

For claim 10, Wymore discloses an arrangement to monitor localisation, posture, movement or properties of one or several objects (O) to be monitored, such as human body, animal or robot in an environment to be monitored, such as in apartment, public space, industrial or office space or in an animal shelter characterized in that it includes transducer means (TRANSDUCER MATRIX) which is composed from a distribution of conductor including at least the first division of conductor and the second division of conductor and means to perform a scanning cycle (CENTRAL UNIT) and means to generate an excitation signal (I-IS) and means (MULTIPLEXER) to conduct said excitation signal to the first division of conductor of the transducer means (TRANSDUCER MATRIX) and means to derive a signal (AS) which is related to a coupling between said first and second divisions of conductor (col 6, lns 43-67 and col 7, lns 1-27).

For claim 11, Wymore discloses wherein it includes means (CENTRAL UNIT) to process the signal AS from transducer means (TRANSDUCER MATRIX) and to derive information related to properties of the object (O) such as function of the heart, respiration or electric conductivity (col 9, lns 60-65; Fig. 2, item 202).

For claim 12, Wymore discloses wherein it signal processing means (CENTRAL UNIT) includes means to transfer information derived from an object forward via the first transmission path such as via (col 9, lns 37-55).

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For claim 13, Wymore discloses wherein the transducer means (TRANSDUCER MATRIX) include components to detect at least two different physical quantities such as electrical coupling and acoustic energy (col 10, lns 1-10).

For claim 14, Wymore discloses wherein the signal (AS) produced by the transducer means (TRANSDUCER MATRIX) is based at least partially on an electric field coupling i.e. capacitive coupling between the object (O) and the transducer means (TRANSDUCER MATRIX) (col 10, lns 25-30)

For claim 15, Wymore discloses wherein the signal processing means (CENTRAL UNIT) include some means which are capable to perform some adaptive functions such as neural networks or other means or artificial intelligence (col 3, lns 1-17).

For claim 16, Wymore discloses wherein the arrangement includes or to it there are attached some means to store spatial information related to the transducer means (TRANSDUCER MATRIX) (col 4, lns 7-25 and col 11, lns 30-36).

For claim 17, Wymore discloses wherein via the transducer means (TRANSDUCER MATRIX) some information about localization of at least one division of conductor and means to transfer this information forward via another transmission path such as with the excitation signal (HS) or with a radio signal (col 3, lns 50-67).

For claim 18, Wymore discloses wherein the arrangement includes special means (EV), which generate an additional signal (IS) by an effect of the excitation signal (HS) (col 4, lns 50-63).

For claim 19, Wymore discloses wherein it includes means or to it has been connected means to form a contact via some other transmission path, such through wired or wireless contact, to be used in receiving or transmitting control information, in receiving or transmitting localization information or receiving or transmitting time information or for other communication with other systems such as with a robot (col 3, lns 50-67).

For claim 20, Wymore discloses wherein information derived from one or several signals (AS, IS, HS) is used to perform some control functions with some means of the arrangements or with some attached means, these functions may include controlling of a robot, lighting, air conditioning, alarm systems or announcement systems or controlling of locking (col 3, lns 18-30).

For claim 21, Wymore discloses that it includes means to derive information characterizing movement of an object (O) such as derive speed distribution of movement or quantities which characterizes that (col 10, lns 22-25).

For claim 22, Wymore discloses wherein at least some of the distributions of conductor of the transducer (TRANSDUCER MATRIX) are placed near such surfaces, such as floor, wall and ceiling surfaces, on which or near which an object (O) has an access (col 3, lns 1-17).

For claim 23, Wymore disclose the arrangement wherein at least a some of the distributions of conductor of the transducer (TRANSDUCER MATRIX) are placed near such surfaces of the environment to be monitored such as in surroundings of dangerous or valuable artifacts (Figs. 2 and 3; col 2, lns 14-20).

For claim 24, Wymore discloses the arrangement wherein at least a some of the distributions of conductor of the transducer (TRANSDUCER MATRIX) is realised realized by using some conductors which are in constructions such as concrete iron, air conditioning pipes, water pipes or electric conductors (col 3, lns 10-14).

For claim 25, Wymore discloses the arrangement wherein the special means (EV) include some means, such as a RFID circuit, a transducer or an active circuit, in order to implement information in signal (IS) generated by the special means (col 12, lns 29-45).

For claim 26, Wymore disclose the arrangement wherein one or several properties, such as an amplitude or a frequency of the excitation signal (HS) are different when an signal (IS) generated by the special means (EV) is evoked referenced to localization of an object (O) (col 3, lns 37-50).

Conclusion

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Ogino et al. (US 5,404,128), Burgess (US 5,886,615), Nitschke et al. (US 6,853,306), Karner (US 6,965,311), and Redfern (US 4,194,194) disclose transducers for indicating localization.

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Mehmood whose telephone number is (571) 272.2976. The examiner can normally be reached on M-F from 8:00am to 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Benjamin Lee, can be reached at (571) 272.2963. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jennifer Mehmood/
Primary Examiner
November 21, 2008